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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,189	01/30/2002	Shunichi Matsushita	KOBAY17.001AUS	9401

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EXAMINER

HUGHES, DEANDRA M

ART UNIT PAPER NUMBER

3663

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,189

Applicant(s)

MATSUSHITA ET AL.

Examiner

Deandra M Hughes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4-6, 9-10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ziari (US 6,522,796 filed Oct. 24, 2000).

****Please note that the references made herein are done so for the convenience of the applicant and are in no way intended to be limiting. The reference should be considered its entirety.**

With regard to claim 1, Ziari discloses the following:

- two pump light sources (fig. 2, 202)
- a polarization beam combiner (fig. 2, 216) to which two lightwaves are input and where the two lightwaves are combined with orthogonal states of polarization (abstract)
- a depolarizer (fig. 2, 202) adapted to depolarize and output (fig. 2, 222) the input lightwaves with a lower degree of polarization (by definition, a depolarizer decreases depolarizes the light beam, i.e., lowers the degree of polarization).

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With regard to claim 4, the claim language 'one *or* a plurality of...' (emphasis mine) can be interpreted as simply 'one of'. For example, one pair of pump lasers meets the claim language of 'one or a plurality of pairs of pump lasers'.

With regard to claim 5, the argument pertaining to claim 4 above applies. Further, a plurality of individual light sources, which are different from the pump sources, is disclosed (e.g. fig. 1, 108-1 through 108-n). This light sources are combined with the individual light sources via 126.

With regard to claim 6, see col. 6, lines 30-45.

With regard to claim 9, see col. 1, lines 63-67.

With regard to claim 10, see col. 7, lines 18-32.

With regard to claim 12, the pumping system is primarily intended for use in Raman amplifiers (e.g. first line of abstract).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziari (US 6,522,796 filed Oct. 24, 2000) in view of Cornwell (US 6,356,383 filed Mar. 31, 2000). Ziari does not specifically disclose a plurality of pairs of pump sources. However, Cornwell teaches the use of a plurality of pairs of pump lights sources (fig. 5 and col. 10, lines 58-67), which are coupled by a polarization beam combiner and

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subsequently depolarized. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the advantage of higher power applications.

With regard to claim 11, Ziari does not specifically disclose the use of isolators. However, isolators are well-known in the art for preventing unwanted reflections. Further, Cornwell clearly teaches the use of isolators (col. 7, lines 9-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use isolators for the advantage of preventing unwanted reflections in the system.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ziari (US 6,522,796 filed Oct. 24, 2000) in view of Bergmann (US 6,040,492 published Mar. 21, 2000). Ziari does not specifically disclose calcite and rutile as birefringent materials. However, calcite and rutile are well-known birefringent materials. Further, Bergmann teaches calcite and rutile as well-known birefringent materials (col. 2, line 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use calcite and rutile for the advantage of commonly used birefringent materials.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Matsushita, Welch, Edakawa, and Wu disclose PBC/depolarization of Raman amplifier pump modules.

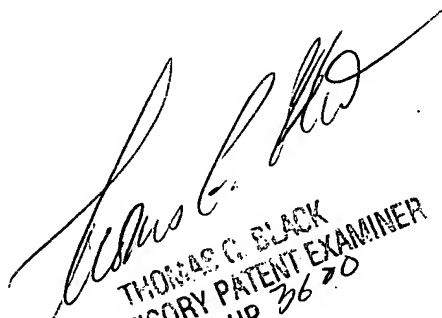
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M Hughes whose telephone number is 703-306-4175. The examiner can normally be reached on M-F, 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Black can be reached on 703-305-9707. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

DMH
June 11, 2003


THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3620